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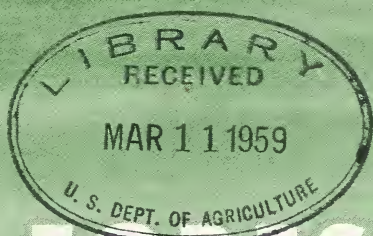
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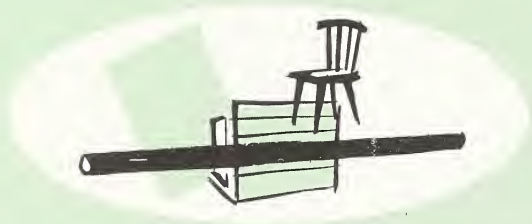
FORESTS IN THE GARDEN STATE



THE FORESTS IN THE GARDEN . . .

Because of the richness and variety of its farm produce, New Jersey has long been known as "the Garden State." This garden has its forests of trees, too—more than one might think. And, like farm crops, forests also need to be tended and protected and harvested.

The forests of New Jersey provide many benefits to the people they serve. They provide raw material for industrial products such as . . .



- lumber
- paper
- furniture

They safeguard watersheds, assuring reliable supplies of water for . . .



- home use
- recreation
- industries

They provide natural recreation areas for . . .



- picnicking
- fishing
- hunting
- camping
- hiking
- just plain relaxing



when settlers first came...

... to what is now New Jersey, more than 300 years ago, they followed the waters and found the forests.

In the Pine Region on the coastal plains of the south, they found great forests of pines . . . impenetrable thickets of white-cedar. Along the Delaware River they saw forests of huge hardwoods. And, in the north, a vastness of forested hills and mountains.

The Indians who lived here had hardly disturbed these forests. But the settlers—Dutch, Swedes, English—needed land for farms and towns. They needed wood for fuel, homes, implements, charcoal. They needed pine tar, pitch, and timbers for ships. So they cut trees—not to plunder or destroy, but to build a civilization.

As New York City and the towns of the East grew, they needed timber. Philadelphia and other cities along the Delaware needed timber too.

So forests fell in New Jersey. Builders in Philadelphia began to wonder what they would use for shingles when the Jersey cedar was all gone. And the cutting went on. By 1860, many stands had been cut over three times. Often, fire followed the cutting.

Fire has done much damage. One area, known now as "The Plains," has been burned so often and so hard that for miles around nothing can be seen but stunted and deformed scrub growth.

Of course, some timber remained. New growth came in. But New Jersey passed its peak of lumber production early. The cutting of timber was dropping steadily in New Jersey even by the time of the Civil War. The timber simply wasn't there any more.

but today...



... Today, New Jersey's timber resources are making a comeback. A sharp decrease in the use of wood for fuel, beginning about 1860, made this possible by giving the timber a chance to grow. Timber production began to rise in the early 1930's, and has continued to rise slowly but steadily.

It may surprise you to know that—despite the hard use the forests have had—even now nearly half the total land area of New Jersey is covered by forests.

And though New Jersey's forests fall far short of supplying all the timber products her people need, lumber production in 1955 was four times what it was in 1932.

And these forests still yield wealth today. In 1954, New Jersey industries that use forest products manufactured \$291,000,000 worth of goods and had payrolls of \$164,000,000. What's more, the forest industries in the State provided jobs for 39,000 people.

But this didn't just happen. Bettering the timber resource was *made* to happen by improved timbering operations... more and better forest management... better utilization of the timber cut... and vigilance, steady vigilance, against fire.

the lumber industry and the pulp and paper industry ...



... are the big users of forest raw materials. They convert trees and logs into finished or semi-finished timber products. Some 150 sawmills and 5 pulp mills get most of their raw materials from forests in the State.

These sawmills produce nearly 17 million board feet* of lumber a year from timber cut in New Jersey. Most of it is used for general construction work, boat building, and in the manufacture of flooring, factory lumber, pallets, boxes, crates, and other wooden containers.

The pulp mills use about 85,000 cords# of pulpwood every year. The pulp they produce is used to make building paper, roofing, insulating materials, and other paper products.

Timber from New Jersey forests is also used to make a variety of other products ... piling, furnace poles (used in copper refining), veneer, excelsior, baskets, rustic fencing and furniture, charcoal ...

*A board foot is a unit of measure that represents a piece of lumber 1 foot square by 1 inch thick, or its equivalent. For example, a 2 by 4 that is 12 feet long contains 8 board feet.

#A cord is a stack of wood 8 feet long, 4 feet wide, and 4 feet high, or its equivalent.



what the industries need...

LUMBER

For sawing lumber, a sawmill needs the longer, larger, and straighter trees. Quality is important, too. Nearly 80 percent of the New Jersey timber sawed into lumber is hardwoods—oaks, yellow-poplar, and sweetgum.

PULPWOOD

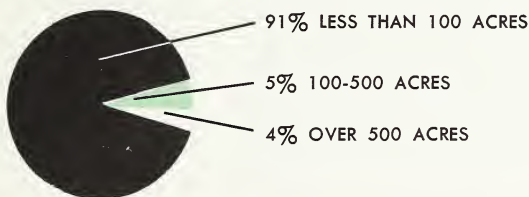
Pulpwood, which is used in short bolts, can come from smaller trees and from the unused parts of sawtimber trees. Over 75 percent of the pulpwood cut in New Jersey comes from softwood trees—pitch pine, shortleaf pine, and Virginia pine.

The present forests in New Jersey seem to offer more raw material for the pulp industry than for the lumber industry. Much of the volume is in small trees—a result of repeated cuttings at fairly short intervals. Besides, the quality of the sawtimber is rather poor. Over 75 percent of the sawtimber volume is in low-quality grades. Defective trees are common. Picky cutting in the past left many poor trees standing, which crowded out better young trees. Fires have also reduced the quality of many trees.

Most of the potential pulpwood today is hardwood. Though softwoods have been preferred for pulp in the past, the pulp industry now knows better ways of making hardwoods into pulp. Hardwoods are now available in abundance; and no doubt they will supply more pulp in the future.

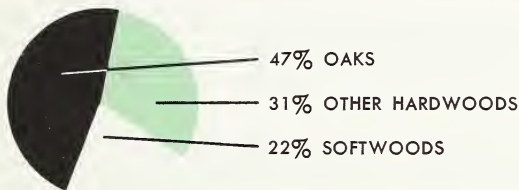
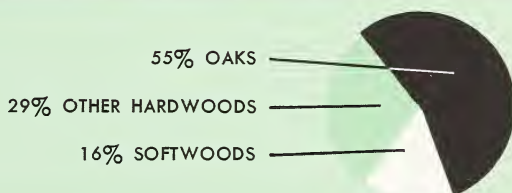
the forest resource today...

Like statistics? Here are some of the highlights from the forest survey of New Jersey.



1. MOST FOREST PROPERTIES ARE SMALL

2. OVER 80% OF THE SAWTIMBER VOLUME IS HARDWOOD



3. THE GREAT BULK OF POTENTIAL PULPWOOD IS HARDWOOD

4. ...THOUGH IN THE PAST, MOST OF THE PULPWOOD CUT HAS BEEN SOFTWOOD

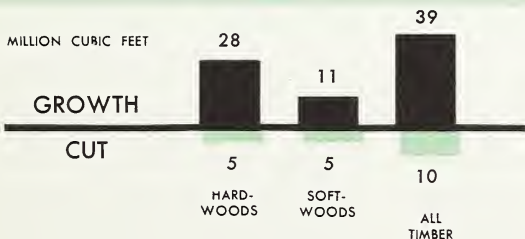
PULPWOOD
85,000 CORDS



TIMBER CUT
(1955)

78% HARDWOODS
22% SOFTWOODS

SAWLOGS
17 MILLION BD.-FT.



5. NEW JERSEY'S TIMBER SUPPLY IS INCREASING, BUT MOST OF THE INCREASE IS HARDWOOD

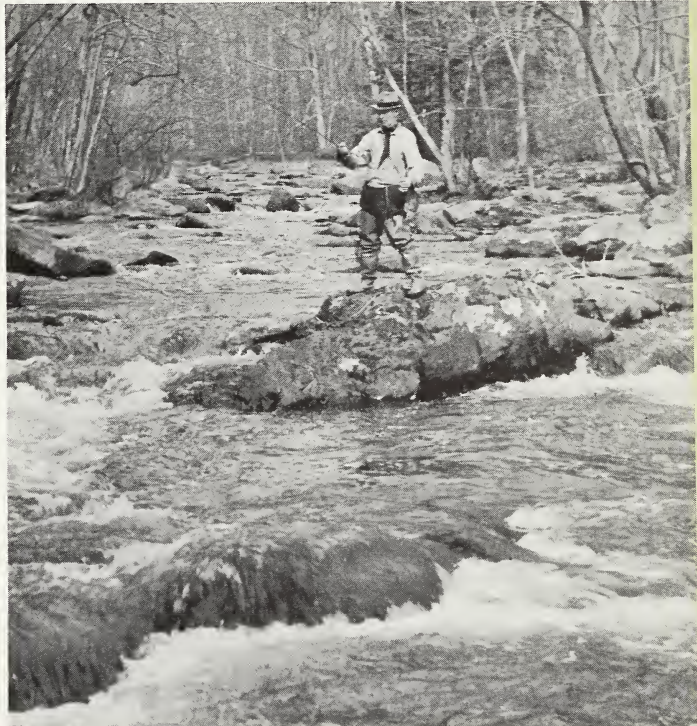
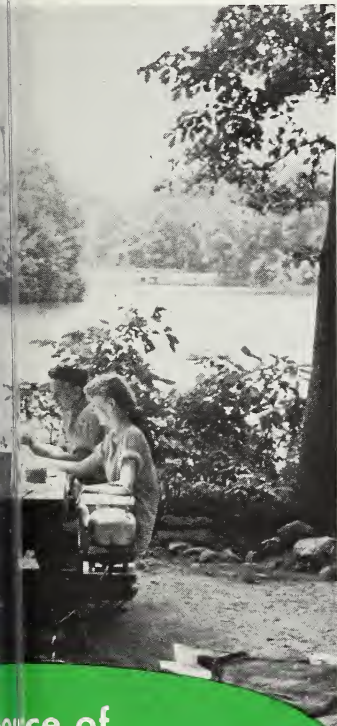
New Jersey's Timber Resource... a



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source of many benefits for many



source of
benefits For Many





Unlike coal, oil, metallic ores, and other natural resources, the forest resource renews itself. It can bring cash crops today; and it can bring cash crops again and again for future generations.

The future for the forest resource of New Jersey? It all depends. The future could be very bright, for the total volume of timber is increasing. In recent years the volume of timber grown has been nearly four times the volume cut. The quality of the new growth is not of the best, but the very abundance of it offers an opportunity of making it better.

How these forests will serve the people of New Jersey in the future depends on how they are treated now. A tremendous supply of small trees is available now for use as pulpwood. But pulpwood need not be all these forests can produce. With good management . . . if the cutting of small trees is done carefully . . . a supply of good sawtimber can be developed too.

everybody benefits . . .

Everybody benefits, to some degree, from the forest resource. So everybody in the State has a stake in the forests of today . . . and the forests of the future.

It may be only that you can turn on a spigot in Morristown and get good water to drink . . . or picnic in Stokes State Forest on a Sunday afternoon . . . that you work in a lumber yard in Newark, or a basket factory near Bridgeton.

It may be that you fish in the Musconetcong . . . or hunt deer east of Onga Hat. Perhaps the cedar shingles on your home in Freehold keep you dry when it rains . . . or the colors of the dogwoods and the maples in the Watchungs bring you joy both spring and fall.

It may be that you berth your boat at a dock built on wooden pilings. Perhaps you use a pound or two of charcoal to broil steaks in your backyard . . . put up a shelf in your kitchen . . . or buy enough lumber to build a house.

To make sure that we continue to enjoy such benefits, there are some things that can be done, and that you may be able to help do.



protection from fire ...

Fire is always a threat to forests. In minutes, flames can destroy what Nature took centuries to produce.

New Jersey, with its heavy population, periods of drought, and inflammable forests, is a high-hazard area for fires. Repeated wild fires have kept large areas unproductive. And almost all the forest fires here are caused by man.

New Jersey has made great progress in reducing the amount of damage done by wild fires. Only one other State in the Northeast spends more money per acre to protect forests from fire.

But that's not enough. A moment of carelessness with a campfire or a cigarette can quickly wipe out the results of such efforts. This is where everybody can help. Be careful with matches, cigarettes, and campfires . . . be careful in burning trash or brush.

Landowners can help by building and maintaining fire breaks and woods roads. In the Pine Region—but only with the advice of State foresters—they can use controlled winter fires to burn off fuel on the forest floor, which reduces the hazard of wild fires.

Forests need to be protected from insects and diseases, too. Here again the landowner should seek professional advice.



letting the young trees grow...

A stand of timber represents both a current cash crop and an investment that increases steadily in value. If the crop is harvested too early, the products will have limited use, and they will bring less income than if they had been allowed to grow.

On the other side, trees that are left beyond their prime may die of insect or disease attack. Even if they do not die, they may deteriorate because of rot. Forest value can be lost this way, too.



In New Jersey, the growth potential of trees is often overlooked. Heavy cuts that remove almost every tree are common in yellow pine and white-cedar stands. More than half the pitch pine and shortleaf pine pulpwood is cut from trees less than 9 inches in diameter; and perhaps a third of the white-cedar harvest is in trees under 5 inches in diameter.

Thus too many trees are cut just when they are starting their best growth. Postponement of the cutting would mean a big increase in future timber production.

In a general way, this is true for New Jersey's forests as a whole, because most of the surplus growth that we are so pleased to report is on small trees. And mostly hardwoods. Much of this volume is usable now for pulpwood. But, with effective management, these small hardwoods could eventually provide the basis for a considerable expansion of the State's forest industries.



Essentially, improving a stand of timber means removing worthless trees, thinning the stand to make additional growing space for better trees . . . just as you pull the weeds from a garden to let the crop plants thrive.

This sort of forest work is needed in New Jersey, because trees too limby, too crooked, and otherwise defective account for full 20 percent of the volume of wood in the forests.

Much of this work is up to private owners, because most of the forest land in New Jersey—nearly 90 percent—is privately owned. There are some 30,000 people who own bits and pieces of forest land in New Jersey; and many of them are not well informed about the management of forests.

Since most of these private holdings are too small to justify employing a full-time forester, the State employs foresters to help and advise owners in efficient harvest cuttings, timber-stand improvement, tree planting, and other desirable forestry practices.



Requests for these services should be made directly to the Forest Management Section of the New Jersey Department of Conservation and Economic Development, at Trenton. Requests may also be made through County Agricultural Agents, Agricultural Conservation Program office managers, or Soil Conservation Service district supervisors. Or, one may hire the services of a professional consulting forester.

Woodland owners are advised to seek such professional aid. For good forestry will keep the forests producing valuable crops of timber. And more timber will mean more jobs, higher incomes, and a healthier economy.

But that's not all. There are other benefits too, and it is good forestry that can produce them: recreational sites for picnicking and swimming . . . water for homes and industries and farms . . . game for sportsmen . . . and that bit of wild greenery that everyone needs.

Good forests and good forestry bring these benefits . . . not just for the few . . . and not just for now . . . but for the many . . . generation after generation.

DATA:

In 1955, the State of New Jersey and the U. S. Forest Service joined forces to make a survey of New Jersey's forests. This was part of a nationwide forest survey being made by the Forest Service.

The idea was to find out how much timber there is, where it is, how fast it is growing, how good it is. This is the kind of information that public agencies need for planning forestry policies and programs, that private industries use in their search for raw materials and in planning their forestry programs.

Obviously, every tree couldn't be counted. Rather, the survey was scientifically planned. Aerial photographs were used to classify forest areas. Then field crews of foresters went into the forests and gathered detailed information. The data were recorded on punch cards, and electronic machines were used to sort them for analysis.

"Forests in the Garden State" was published by the Northeastern Forest Experiment Station, Forest Service, U.S. Department of Agriculture, in cooperation with the Forest Management Section, New Jersey Department of Conservation and Economic Development.

Text by Edwin vH. Larson and Wendell E. Smith, Northeastern Forest Experiment Station.

MORE DETAILED INFORMATION . . .

about the findings of the forest survey in New Jersey may be obtained by writing for the report, "The Timber Resources of New Jersey," published by the Northeastern Forest Experiment Station, 102 Motors Avenue, Upper Darby, Pa.

